CLAIMS

What is claimed is:

1. A method for reconstructing a database structure comprising:

providing a database structure having a domain structure;

providing data; and

reconstructing the database structure into a transformed database structure comprising generating a plurality of structures, the plurality of structures comprising structures generated as a function of the domain structure, and structures generated as a function of the data.

2. The method of Claim 1 wherein said domain structure is selected from the group consisting of relational metaphors, object-based metaphors, network metaphors, hierarchical metaphors, and combination thereof.

3. The method of Claim 1 wherein said reconstructing comprises:

generating a structure for domain values;

generating a structure for domain linkages;

generating a structure for domain elements;

generating a structure for domain entities; and

generating a structure for domain relationships.

4. The method of Claim 1 wherein said reconstructing further comprises:

generating a structure for instances of data records; and

generating a structure for instances of binary relations.

5. The method of Claim 4 wherein said reconstructing further comprises:

generating individual structures for data types.

6. The method of Claim 4 wherein said reconstructing further comprises:

generating a structure for domain values reference.

7. The method of Claim 1 further comprising:

generating an object control structure.

8. The method of Claim 7 further comprising:

generating a second object control structure.

9. The method of Claim 8 further comprising:

performing at least one of a logical operation and set operation on said object control structure and said second object control structure.

10. The method of Claim 7 further comprising:

manipulating said database structure by modifying said object control structure.

11.   The method of Claim 10 wherein said manipulating does not change said database structure.

12.   The method of Claim 10 wherein said manipulating does not require authorization from a database management system.

13.   The method of Claim 7 further comprising:
manipulating said data by modifying said object control structure.

14.   The method of Claim 13 wherein said manipulating does not change said data.

15.   A method of using a bitmap as a control structure to customize a configuration of a domain structure comprising:
providing an object control structure; and
applying the bitmap to the object control structure, wherein such applying results in a customized configuration of the domain structure.

16.   The method of Claim 15 wherein said customized configuration of said domain structure defines a sub database of a composite database.

17.   The method of Claim 15 further comprising:
defining a condition for said object control structure; and
asserting or retracting a bit of said bitmap corresponding to the condition.

18. The method of Claim 15 further comprising:

combining a plurality of bitmaps; and

generating said bitmap in response to the combining of the plurality of bitmaps.

19. The method of claim 18 wherein said combining further comprises:

performing at least one of a logical operation and set operation on said plurality of bitmaps.

20. A method of generating an object for a linkage identifying an implicit relationship of a data structure comprising:

providing a first object which represents a first portion of the data structure, the first object having a first object identifier uniquely identifying the first object;

providing a second object which represents a second portion the data structure, the second object having a second object identifier uniquely identifying the second object, wherein the first portion of the data structure and the second portion of the data structure have the implicit relationship; and

generating a third object comprising the first object identifier and the second object identifier, the third object having a third object identifier uniquely identifying the third object, whereby a linkage is created between the first object and the second object.

21. The method of Claim 20 further comprising:

providing a fourth object, the fourth object having a fourth object identifier uniquely identifying the fourth object, wherein the fourth object represents a third portion of said data structure which also shares said implicit relationship with said first portion of said data structure and said second portion of said data structure;

wherein said generating of said third object further comprises the fourth object identifier, whereby said linkage is created between said first object, said second object, and the fourth object.

22. The method of Claim 20 wherein said linkage captures a portion of a domain structure.

23. The method of Claim 20 wherein said linkage captures data held by a database.

24. The method of Claim 20 wherein said third object is used to create one selected from the group consisting of a domain linkage structure, a domain element structure, a domain relationship structure, and an instances of relationship structure.

25. A system for reconstructing a domain structure comprising:

a database structure;

data; and

means for reconstructing the database structure into a transformed database structure comprising means for generating a plurality of structures, the plurality of structures comprising structures generated as a function of the database structure, and structures generated as a function of the data.

26. The system of Claim 25 wherein said domain structure is selected from the group consisting of relational metaphors, object-based metaphors, network metaphors, hierarchical metaphors, and combination thereof.

27. The system of Claim 25 wherein said means for reconstructing comprises:

means for generating a structure for domain values;

means for generating a structure for domain linkages;

means for generating a structure for domain elements;

means for generating a structure for domain entities; and

means for generating a structure for domain relationships.

28. The system of Claim 25 wherein said reconstructing further comprises:

means for generating a structure for instances of data records; and

means for generating a structure for instances of binary relations.

29. The system of Claim 25 further comprising:
means for generating an object control structure.

30. The system of Claim 25 further comprising:
means for generating a second object control structure.

31. The system of Claim 30 further comprising:
means for performing at least one of a logical operation and set operation on said object control structure and said second object control structure.

32. The system of Claim 29 further comprising:
means for manipulating said database structure by modifying said object control structure.

33. A system of using a bitmap as a control structure to customize a configuration of a domain structure comprising:
means for providing an object control structure; and

means for applying the bitmap to the object control structure, wherein such applying results in a customized configuration of the domain structure.

34. The system of Claim 33 wherein said customized configuration of said domain structure defines a sub database of a composite database.

35. The system of Claim 33 further comprising:
means for defining a condition for said object control structure; and
means for asserting or retracting a bit of said bitmap corresponding to the condition.

36. The system of Claim 33 further comprising:
means for combining a plurality of bitmaps; and
means for generating said bitmap in response to the combining of the plurality of bitmaps.

37. The system of claim 36 wherein said means for combining further comprises:
means for performing at least one of a logical operation and set operation on said plurality of bitmaps.

38. A system of generating an object for a linkage identifying an implicit relationship of a data structure comprising:

means for providing a first object which represents a first portion of the data structure, the first object having a first object identifier uniquely identifying the first object;

means for providing a second object which represents a second portion the data structure, the second object having a second object identifier uniquely identifying the second object, wherein the first portion of the data structure and the second portion of the data structure have the implicit relationship; and

means for generating a third object comprising the first object identifier and the second object identifier, the third object having a third object identifier uniquely identifying the third object, whereby a linkage is created between the first object and the second object.

39. The system of Claim 38 further comprising:

means for providing a fourth object, the fourth object having a fourth object identifier uniquely identifying the fourth object, wherein the fourth object represents a third portion of said data structure which also shares said implicit relationship with said first portion of said data structure and said second portion of said data structure;

wherein said means for generating of said third object further comprises the fourth object identifier, whereby said linkage is created between said first object, said second object, and the fourth object.

40. The system of Claim 38 wherein said linkage captures a portion of a domain structure.

41. The system of Claim 38 wherein said linkage captures data held by a database.

42. The system of Claim 38 wherein said third object is used to create one selected from the group consisting of a domain linkage structure, a domain element structure, a domain relationship structure, and an instances of relationship structure.